

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Rulemaking to Amend Parts 1, 2, 21 and 25)
Of the Commission's Rules To Redesignate)
The 27.5 - 29.5 GHz Frequency Band, To)
Reallocate the 29.5-30.0 GHz Frequency Band,)
To Establish Rules and Policies for Local)
Multipoint Distribution Service and for)
Fixed-Satellite Services)

CC Docket No. 92-297

OPPOSITION OF TRW INC. TO TELEDESIC CORPORATION'S PETITION FOR CLARIFICATION AND/OR RECONSIDERATION

TRW Inc., by counsel and pursuant to Section 1.429 of the Commission's Rules, hereby opposes a portion of the relief sought by Teledesic Corporation ("Teledesic") in its "Petition for Clarification and/or Reconsideration" of the Commission's *Third Report and Order* in the above-captioned proceeding.^{1/} In its Petition, Teledesic maintains that there is some ambiguity in the Commission's discussion of the "burden sharing" obligations of non-government non-geostationary orbit ("NGSO") fixed-satellite service ("FSS") systems, and calls for "clarification" of this coordination requirement.

^{1/} See Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services (*Third Report and Order*), FCC 97-378, slip op. (released October 15, 1997) ("*Third Report and Order*").

TRW is an applicant to add Ka-Band frequencies at 28.6-29.1 GHz (uplink), 29.25-30.0 GHz (uplink) and 17.7-20.2 GHz (downlink) to its proposed Global EHF Satellite Network,^{2/} and has participated in this proceeding from the beginning, including filing comments and reply comments in response to the *Third Notice of Proposed Rule Making* (“*Third NPRM*”).^{3/} TRW believes that the Commission’s mandate that “all NGSO FSS licensees . . . bear some portion of the technical and operational constraints necessary to accommodate multiple ‘non-homogeneous’ NGSO FSS systems”^{4/} is a straightforward and essential requirement, and that it should not be “clarified” in the manner urged by Teledesic.

Discussion

Teledesic’s expressed alarm at the consequences of requiring licensed system proposals to bear their share of operational constraints is much exaggerated. It appears from Teledesic’s petition that what it really desires is a Commission statement that negates Teledesic’s obligation take any responsibility for accommodating additional co-frequency NGSO FSS systems. Such a reversal of course would clearly be inappropriate, as the Commission was wholly justified in providing for all systems to

^{2/} See Amendment to TRW Global EHF Satellite Network Application, File No. _____ (filed December 22, 1997). Teledesic is authorized to operate at 28.6-29.1 GHz (uplink) and 18.8-19.3 GHz (downlink). See *Teledesic Corporation*, DA 97-527, slip op. at 15-16 (¶ 33) (IB, released March 14, 1997) (“*Teledesic Corp.*”).

^{3/} See Comments of TRW, CC Dkt. No. 92-297 (filed September 7, 1995); Reply Comments of TRW (filed October 10, 1995).

^{4/} *Third Report and Order*, FCC 97-378, slip op. at 16 (¶ 38).

share the burdens of co-frequency operation. Indeed, this burden sharing requirement is particularly appropriate in the case of Teledesic, which was found basically qualified to be a licensee only by virtue of a waiver of the Commission's rules that was in turn premised on the fact that Teledesic's proposed NGSO FSS system does not preclude future Ka-band NGSO FSS systems.^{5/}

Teledesic was initially authorized without having to satisfy the financial qualification standard that is normally applicable to FSS applicants.^{6/} In granting the authorization, the International Bureau pointedly noted that if it had agreed with Teledesic's initial conclusion that its use of Ka-band frequencies for its service links would not support multiple entry opportunities, it would have been "reluctant to grant Teledesic's request for waiver of [its] FSS financial qualification requirements."^{7/} Thus, a failure by Teledesic to take necessary steps to permit other operators to offer service using these bands would undercut a fundamental premise upon which its authorization was initially granted — the availability of additional opportunities for new operators to offer service in the same frequency bands.^{8/}

^{5/} See *Teledesic Corp.*, DA 97-527, slip op. at 6-7 (¶ 13); *Third Report and Order*, FCC 97-378, slip op. at 9 (¶ 18).

^{6/} See 47 C.F.R. § 25.140(c).

^{7/} *Teledesic Corp.*, DA 97-527, slip op. at 6-7 (¶ 13).

^{8/} Even Teledesic is at least constrained to acknowledge, albeit in a footnote, "its responsibilities as a licensee in an evolving service . . . to share information with new entrants and even make minor system adjustments to accommodate them . . ." *Teledesic* (continued...)

Teledesic's citation of decades-old cases concerning interference to broadcast and other wireless facilities, which operate on specified channels, does nothing to advance its suggestion that it should be exempt from shouldering a portion of the sharing burden. The "first-in-time" cases it cites are of no relevance in the context of satellite interference coordination, where applicants and licensees are expected to share spectrum. The cited cases deal with interference avoidance obligations in the specific circumstance where a new terrestrial facility constructed in physical proximity to an existing licensed station causes actual interference on the assigned channel of the operational licensee.^{9/} These cases have no applicability to coordination amongst new satellite systems proposing to share frequencies — particularly when none of the systems is actually in operation.^{10/}

The Commission did specifically recognize that it might be appropriate to consider whether a network is already in-orbit and operational when "apportioning burden."^{11/} With respect to systems that are not yet constructed and implemented, however, the appropriate approach is precisely the one adopted by the Commission — to

^{8/}(...continued)

Petition at 18 n.30.

^{9/} See, e.g., *Midnight Sun Broadcasting Co.*, 11 F.C.C. 1119 (1947); *Sudbrink Broadcasting of Georgia, Inc.*, 65 F.C.C.2d 691, 692 (1977).

^{10/} Leaving aside the absence of exclusive frequency assignments to FSS operators, it is impossible in any case for a "newcomer" to cause actual interference without systems already in operation.

^{11/} *Third Report and Order*, FCC 97-378, slip op. at ¶ 38.

require all non-government systems to adjust their future operations as necessary to promote maximum spectral efficiency, and not to give absolute priority to any particular system based solely on the date that its license was granted.^{12/} All licensees and applicants should be encouraged to take full advantage of technological advances that may permit overall enhancements of FSS capacity.

Recognition that coordinating the use of shared NGSO FSS spectrum requires flexibility on the part of both licensees and applicants does not negate or diminish the value of a license. Coordination of NGSO FSS systems should involve capacity trade-offs in order to ensure multiple entry, but should not require significant re-engineering of a system. Such trade-offs are an expected part of international satellite coordination, and acceptance of these burdens does not constitute forced acquiescence either to harmful interference or to major alteration of system architecture.

Moreover, there is no inconsistency between asking NGSO FSS licensees to share the burden of capacity constraints with new applicants and the requirement that applicants in the 1.6/2.4 GHz Mobile Satellite Service “not cause unacceptable interference to other authorized users of the spectrum.”^{13/} The specification that it is “unacceptable” interference that is prohibited implicitly acknowledges that some

^{12/} In this regard, TRW notes that Teledesic’s system design remains in a somewhat fluid state; it has filed an application for a modification of its license reflecting a significant system redesign (*see* Modification Application of Teledesic Corporation, File No. 195-SAT-ML-97 (filed September 26, 1997)), and it appears that it has not yet finalized its inter-satellite service proposal.

^{13/} *See* Teledesic Petition at 19, *citing* 47 C.F.R. § 143(b)(2)(iv).

interference must be considered acceptable and that applicants and licensees alike must work together to ensure that the spectrum is efficiently utilized and competitive multiple entry is possible.

Teledesic offers a flawed comparison between its own circumstances and the license issued to Motorola for the Iridium system, maintaining that absent the existence of “priority” over subsequent applicants, Teledesic or another entity could file a new 1.6/2.4 GHz MSS Application and force Motorola to “give up some of the spectrum currently licensed for the *exclusive* use of the Iridium system.”^{14/} The first flaw in this assertion is the fact that the 1.6/2.4 GHz band plan itself was the product of intersystem coordination between Motorola and the other 1.6/2.4 GHz MSS applicants, with Motorola ultimately gaining access to only fifty percent of the spectrum it initially sought. Second, unlike Teledesic, Motorola was required to satisfy a strict financial standard prior to licensing.^{15/}

By contrast, Teledesic was granted authority to use frequencies on a non-exclusive basis, allowing the financial qualification requirement to be waived.^{16/} Given the fact that Teledesic was the sole first round NGSO FSS system in these bands and

^{14/} Teledesic Petition at 19 (emphasis added).

^{15/} See *Motorola Satellite Communications, Inc.*, 10 FCC Rcd 2268, 2270 (¶ 11) (1995); *Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/ 2483.5-2500 MHz Frequency Bands*, 9 FCC Rcd 5937, 5954 (¶ 43) (1994) (describing assignment to a TDMA/FDMA system of “dedicated bandwidth at 1621.35-1626.5 MHz.”)

^{16/} See *Teledesic Corp.*, DA 97-527, slip op. at 6-7 (¶ 13).

received access to all service-link spectrum it requested, the non-exclusive nature of Teledesic's authorization and the basis for the waiver of the financial standard would be eviscerated if Teledesic were somehow insulated from the "burden" of accommodating future entry. Thus, contrary to Teledesic's assertion, there is a highly principled basis for according these two licensees different treatment vis-à-vis later filed applicants.^{17/}

Finally, burden sharing among applicants and licensees does not offend the United States' international obligations by erecting a double-standard with respect to U.S. versus foreign applicants. To say that foreign applications will be rejected in "exceptional cases" where they pose "*debilitating* interference problems or where the only technical solution would require U.S.-licensed systems to *significantly alter* their operations"^{18/} is wholly distinct from suggesting that U.S. licensees will not be required to accept reasonable operational constraints in order to accommodate other systems. Indeed, any insinuation that previously licensed U.S. systems will not be expected to bear their share of the burden in crafting spectrum coordination agreements would cause great consternation among foreign administrations that have signed on to the WTO Agreement on Basic Telecommunications. With respect to both U.S. and foreign applicants, U.S. licensees will necessarily be required to make reasonable accommodations, and the Commission's language in the *Third Report and Order* simply recognizes this fact.

^{17/} Compare Teledesic Petition at 19.

^{18/} *Amendment of the Commission's Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, FCC 97-399, slip op. at 66 (¶ 150) (released November 26, 1997) (emphasis added).

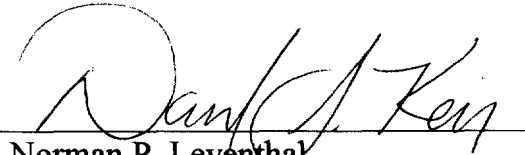
Conclusion

There is no basis for the sort of "clarification" that Teledesic proposes. Teledesic owes its authorization to the very language it now wishes to "clarify" out of existence. The Commission should deny this aspect of Teledesic's Petition, and reaffirm its critical and unambiguous statement that "all NGSO FSS licensees [will] bear some portion of the technical and operational constraints necessary to accommodate multiple 'non-homogeneous' NGSO FSS systems."

Respectfully submitted,

TRW Inc.

By:

A handwritten signature in cursive script, appearing to read "David S. Keir", written over a horizontal line.

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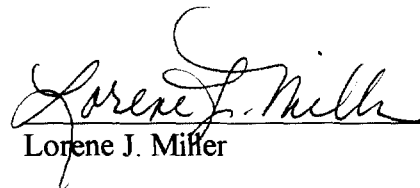
CERTIFICATE OF SERVICE

I, Lorene J. Miller, do hereby certify that true and correct copies of the foregoing "Opposition of TRW Inc. to Teledesic Corporation's Petition for Clarification and/or Reconsideration" were mailed, first-class postage prepaid, this 5th day of February, 1997 to the following:

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